

In the Application of:

Coassini et al.

Application No.: 10/789,183

Filed: February 26, 2004

Page 5

PATENT
Attorney Docket No.: AURO1420-1

REMARKS

Claims 1 and 3 have been amended. Claims 2 and 19-71 have been canceled. Subsequent to the entry of the present amendment, claims 1 and 3-18 are pending and at issue. These amendments add no new matter as the claim language is fully supported by the specification and original claims.

I. Rejections Under 35 U.S.C. § 103(a)

Claims 1-6 and 8-18 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Downs et al. (2002/0153055) in view of Peck et al. and/or in view of Krug et al. Applicants respectfully traverse this rejection.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify a reference or to combine the teachings of multiple references. Second, there must be a reasonable expectation of success. Third, the prior art must teach or suggest all of the recited claim limitations. Of course, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure..

The Office Action alleges that "Downs teaches a support frame (table-like platform on which the dispenser is mounted), a dispensing module 35, 30, 25 and a moving platform 50 for supporting plates (Fig. 1, [0017], elsewhere). The fluid dispensers include at least two supporting dispensers, optionally in a plurality of linear arrays [0011]."

A closer reading of Downs et al. discloses "systems for simultaneously producing multiple fluid mixtures in *multiple multiwell plates*." ([0047], emphasis added). Indeed, throughout Downs et al. it indicates that the system is used with multiple multiwell plates. At paragraph [0011] referenced in the Office Action, it states that "the array includes at least two fluid dispensers that are spaced at least a sufficient distance apart to simultaneously dispense a fluid into a well of a first multiwell plate

and a corresponding well of a second multiwell plate when both plates are placed beneath the array of fluid dispensers.” The addition of Peck et al. and/or in Krug et al. does not cure this defect.

In contrast, the present invention relates to a method and apparatus for delivering multiple reagents into a single multiwell plate. Applicants have amended claim 1 to clarify that the fluid delivery subsystem includes dispensing tips collectively arranged in a rectangular array configured for dispensing into wells of an assay plate. Accordingly, the prior art fails to teach or suggest all of the recited claim limitations.

The Office Action further asserts that it would have been “obvious to one of ordinary skill in the art to attach the dispensing module to the frame in order to provide a stable arrangement, e.g., to ensure that the dispensing module maintains the proper relative positioning with respect to the moving platform 50 as was known in the art. It would have been further obvious to make it removably attached, including the use of quick release claims, in order to facilitate assembly and disassembly for moving, cleaning and/or part replacement or repair as was known in the art”.

The Applicants respectfully disagree with this statement. Nowhere in the prior art, separately or in combination, is there disclosure of a dispensing module that is removably attached to the support frame. Downs teaches “a linear array of fluid dispensers in which the linear array includes a number of fluid dispensers that is greater than the number of wells in a line of wells (e.g., a row or column of wells) of a single multiwell plate, which line of wells is parallel to a longitudinal axis of the linear array” (Downs, paragraph [0012]). Downs et al terms this as a “massively parallel fluid dispensing system” capable “of simultaneously delivering multiple fluids to multiple wells in multiple microwell plates. In a preferred embodiment of a massively parallel fluid dispensing system of the invention, for example, the system includes a linear array of 96 fluid dispensers, each of which fluidly communicates with a different fluid container, such that as many as 96 different fluids can be dispensed simultaneously to 96 different wells disposed in, e.g., 8 or 12 different 96-well multiwell plates depending upon the orientation of the plates relative to the linear array” (Downs, paragraph

[0042]). With this large array of fluid dispensers capable of dispensing into multiple multiwell plates, it is unlikely that a person skilled in the art would combine this large number of fluid dispensers into a removable dispensing module, as described in the present application. There also may not be a reasonable expectation of success of modifying the prior art to make a removable dispensing module with an array as large as the one described in Downs et al. The addition of Peck et al. and/or in Krug et al. does not cure these defects.

In addition, the present invention is not directed to removing components for cleaning or part replacement, as suggested by the Office Action, instead the present invention replaces the entire dispensing module. The present invention uses a dispensing module that is a self-contained pressurized fluid delivery system that is adapted for complete and reproducible attachment to or detachment from the support frame, thus avoiding cumbersome manipulation of reagent containers and/cleaning of the components between tests. The “replacement of reagent hardware may be necessary to avoid contamination of liquid samples from previous reagents that remain in the fluid paths, or the unnecessary mixing of reagents that remain in the fluid paths, or the unnecessary mixing of reagents that could result in inappropriate reagent ratios leading to inaccurate results.” “The detachable dispensing module 10 of the present invention avoids these problems by enabling replenishment or replacement of reagents 50 for continued or subsequent testing, without requiring the cumbersome and inefficient disconnecting and reconnecting, or flushing, of fluid paths, reagent containers 25, and other associated equipment. Instead, the entire self-contained pressurized fluid delivery subsystem 20 may be easily and efficiently replaced, and only the single air supply line 120, along with any necessary electrical connections, must be reconnected upon replacement of the dispensing module 10” (paragraphs [0048], [0049]).

Nowhere in the prior art references cited, either separately or in combination is there suggestion or motivation to have a dispensing module removably attached to the support frame, as disclosed in the present invention. Accordingly, Applicants respectfully request withdrawal of this rejection.

In the Application of:
Coassin et al.
Application No.: 10/789,183
Filed: February 26, 2004
Page 8

PATENT
Attorney Docket No.: AURO1420-1

II. No rejection of claim 7 in the Office Action

In the present Office Action there is no rejection of claim 7. There is also no indication that it is allowed. Claim 7 depends upon claim 1. Applicants have shown above that claim 1 is allowable over the prior art. Claim 7 should be allowed for at least those same reasons.

III. Conclusion

In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. In the event any matters remain to be resolved, the Examiner is requested to contact the undersigned at the telephone number given below so that a prompt disposition of this application can be achieved. No fee is believed due in connection with this Response. However, The Commissioner is hereby authorized to charge any fees that may be associated with this communication, or credit any overpayment to Deposit Account No. 07-1896.

Respectfully submitted,

Date: November 8, 2005

for Michael R. Haile Reg. No 38,724
Lisa A. Haile, J.D., Ph.D.
Registration No.: 38,347
Telephone: (858) 677-1456
Facsimile: (858) 677-1465

DLA PIPER RUDNICK GRAY CARY US LLP
4365 Executive Drive, Suite 1100
San Diego, California 92121-2133
USPTO CUSTOMER No. 28213